Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules	)	CC Docket No. 94-102
To Ensure Compatibility with	)	
Enhanced 911 Emergency Calling Systems	)	
	)	
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UNITED STATES CELLULAR CORPORATION
QUARTERLY E911 IMPLEMENTATION REPORT

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November 3, 2003

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United States Cellular Corporation ("USCC"), by its undersigned attorneys, hereby submits its fifth quarterly E911 implementation report pursuant to the Commission's order staying certain E911 phase II deadlines for many non-nationwide wireless carriers.[1]

I. Introduction

USCC is a Tier II carrier under the *Order to Stay* issued by the Commission in 2002.[2] As a wireless carrier with systems in many rural markets, USCC faces particular challenges in upgrading its technology and interacting with a wide variety of PSAPs across its service area. To meet these challenges, USCC continues to increase both the financial and personnel resources devoted to the deployment of E911 services throughout its service area. This continued commitment has facilitated USCC's ongoing compliance with the Commission's

[1] *See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers*, Order to Stay, 17 FCC Rcd 14841 (2002) ("*Order to Stay*").

[2] *Id* ¶ 23

E911 deployment milestones in this quarter, including the maintenance of a 99 percent rate of deployment of phase I service to PSAPs ready to provide the service

II. Status of Phase I Requests

USCC and its E911 vendor, TeleCommunication Systems, Inc. ("TCS"), actively work with all requesting PSAPs to deploy phase I E911 service throughout USCC's service area. In some cases, USCC has proceeded with deployment despite the fact that a particular PSAP's request does not amount to a valid request for service under the Commission's rules, including some markets where the PSAP made only an oral request.

To date, USCC has received 719 requests for phase I service and successfully deployed phase I service to 610 PSAPs This represents full phase I deployment to approximately 85 percent of the PSAPs that have requested the service. Of the 109 pending phase I requests, 93 have been pending less than six months. Attached as Appendix A is a spreadsheet identifying those PSAPs requesting phase I service and the markets where USCC has deployed phase I.

USCC has 16 PSAP requests for phase I service that have been pending for more than six months. Like other wireless carriers, USCC has encountered various delays in the phase I roll-out due to circumstances beyond its control, including delays related to PSAP readiness, ALI database and connectivity issues, and LEC-related delays. Of the 16 phase I requests pending for more than six months, 12 have been delayed by factors outside of USCC's control. In seven of those cases, the progress of phase I deployment has been delayed because either the PSAPs do not have the necessary equipment to receive and implement phase I service or the PSAPs have requested additional time to review and approve the maps and traffic plans

necessary for phase I deployment One of the 13 PSAPs placed its phase I request on hold due to a fire at its facilities, and another PSAP is experiencing ALI database connectivity problems. Two PSAPs have encountered delays related to routing and are troubleshooting the problems with their respective local exchange carriers.

Thus, USCC has deployed phase I service to all but four requesting PSAPs where the PSAP was ready to receive and utilize the phase I information. This represents a 99 percent compliance rate for USCC's deployment of phase I service. USCC and TCS plan to continue their efforts to work toward full phase I deployment for all requesting jurisdictions.

II. Status of Phase II Requests

USCC has continued to deploy phase II E911 service in compliance with the Commission's *Order to Stay* To date, USCC has received 243 PSAP requests for phase II service. Of these, USCC has successfully deployed phase II E911 service to 109 PSAPs in its service area This represents a significant increase over the last quarter in the number of PSAPs for which USCC is providing phase II service. The attached spreadsheet identifies those PSAPs requesting phase II service and those markets in which USCC has deployed phase II.

USCC currently has 134 outstanding PSAP requests for phase II service. Of these, 94 have been pending less than six months.

USCC has 40 phase II requests pending more than six months. Of these 40 outstanding phase II requests, 29 (74 percent) are in markets that are experiencing delays due to PSAPs not having the necessary equipment to receive and utilize phase II information. In many of these markets, USCC and the requesting PSAP have reached an agreement that USCC will deploy phase II service within 60 days of the PSAP notifying USCC of its readiness. In these

cases, USCC and its vendors have completed all the necessary steps toward phase II deployment and are waiting for the PSAPs to upgrade their systems.

One of the 40 phase II PSAP requests pending more than six months is due to unexpected delays encountered during the deployment of phase II service. This PSAP has requested that USCC delay drive testing, the final step prior to phase II deployment, for additional call-taker training. It is anticipated that phase II service will be deployed to this requesting PSAP within 30 days

Eight of the 40 phase II requests pending for more than six months have been delayed due to USCC's conversion of the markets from TDMA to 1XRTT CDMA technology. As previously reported to the Commission, USCC is currently in the second year of a three-year conversion of its TDMA markets to 1XRTT CDMA technology.[3] A significant benefit from this conversion, which involves a complicated, multiple step process to clear sufficient spectrum in order to overlay a CDMA system in each market, is that a handset-based phase II solution will be available in these markets The overbuild process continues to be well ahead of the schedule

[3] As the Commission has recognized, as a midsized carrier serving predominantly rural markets, USCC consistently selected the digital air interface used by the large, nationwide carriers serving nearby major metropolitan areas in order to maximize roaming capabilities. *See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Petitions for Reconsideration of Phase II Compliance Deadlines*, CC Docket No 94-102, FCC 03-247 (released October 21, 2003) at ¶22. As a result, USCC currently has a mixed digital air interface of both CDMA and TDMA systems in its network. In order to keep its service competitive over the long term, and due to industry abandonment of TDMA technology, USCC announced in late 2001 that it would convert its TDMA markets to CDMA 1XRTT technology over a three year period *See* United States Cellular Corporation's Supplement to Petition for Waiver of Sections 20 18(e) and (g) of the Commission's Rules, CC Docket 94-102 (filed November 30, 2001) ("*USCC Supplement*").

originally presented to the Commission [4] USCC has now deployed phase II service to 35 PSAPs in markets where USCC has completed the CDMA overlay.

Seven of the eight outstanding phase II requests impacted by the conversion are in markets in Vermont where the CDMA overbuild was completed in October 2003. USCC is in the process of deploying phase II service in these markets and expects to roll it out by the end of November 2003 The remaining market in Texas is scheduled for overlay in third quarter 2005, with phase II deployment planned for immediately thereafter. USCC continues to communicate with affected PSAPs regarding the timetable for converting markets to CDMA technology and has agreed to provide updates on its progress as necessary.

USCC's conversion schedule from TDMA to CDMA technology in some cases results in deployment of phase II service beyond the six month deployment time frame provided in the Commission's rules However, USCC submits that this ambitious, time-consuming and costly network overbuild provides the fastest path to full phase II compliance in USCC's rural TDMA markets. As noted by other Tier II and Tier III carriers serving small, rural TDMA markets, there are significant limitations on the accuracy of network solutions absent the time-consuming and expensive process of constructing location-only sites and/or securing necessary landlord and zoning approvals to install so-called AOA antennas.[5]

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[4] USCC completed the CDMA overbuild between six months to one full year ahead of schedule in its Wisconsin and northern Illinois markets, as well as several markets in Iowa. In addition, USCC has accelerated the CDMA overbuild in its northeastern markets by one year and stepped up the scheduled overbuild between three and five months in its southwestern markets.

[5] *See, e.g*, Tier III Coalition Petition for Forbearance, WT Docket No. 02-377, at 12 (affirming the inability of Tier III carriers to find a network-based solution without the need for additional location-only cell sites); *Ex Parte* Notice of Rural Cellular Corporation, December 19, 2002 (describing the difficulties in installing and utilizing AOA antennas at its cell sites)

In all CDMA jurisdictions where phase II requests have been received, USCC continues the process of installing necessary software loads on its switches to provide phase II service and upgrading all the trunking between these switches and the Mobile Positioning Center of its E911 vendor, TCS USCC and TCS also have successfully integrated the CDMA switches serving these markets with the TCS equipment and the phase II software USCC has completed installation of a permanent SS7 connection between its network and TCS – a connection that will significantly reduce the time needed to deploy phase II in response to future PSAP requests. USCC is continually updating the Base Station Almanac (BSA) used to improve and verify the accuracy of location information provided to PSAPs. The BSA continues to be populated with detailed logistical information for all the cell sites serving USCC's CDMA markets where there are phase II requests

USCC has contracted with Marconi Corporation to do the necessary calibration, accuracy and drive testing to ensure that USCC's phase II service meets the Commission's accuracy requirements. Marconi has conducted testing on USCC's CDMA switches that are serving PSAPs with live phase II deployments. These tests have been conducted using the CDMA location-capable mobile phones currently available to USCC's customers. Marconi's accuracy test results confirm that USCC is meeting the Commission's requirement that 67 percent of the calls are accurate to within 50 meters and 95 percent of the calls are accurate to within 150 meters.[6]

[6] 47 C.F.R. § 20.18(h).

III. Status of Handset Deployment

USCC remains in compliance with currently applicable handset deployment benchmarks and anticipates meeting future deployment benchmarks in the next quarter. USCC began selling GPS-enabled handsets by March 1, 2003 and at least 25 percent of USCC's new handset activations were E-911 capable phones as of May 31, 2003 USCC's recent handset sales indicate that it will exceed the Commission's next penetration benchmark – namely, that at least 50 percent of USCC's new handset activations are E911 capable by November 30, 2003.[7] In September 2003, over 80 percent of total handsets sold by USCC had E911 capability. Since March 2003, USCC has activated over 400,000 GPS-enabled handsets.

Currently, USCC has ten GPS-enabled handsets available for sale in its CDMA markets: the Motorola v120e, Motorola T731, Audiovox CDM8500, Audiovox 9500, SonyEricsson T206, Kyocera 7135, Kyocera 3225, Nokia 3585i, Nokia 3586i and LG VX4400. Six additional GPS-enabled phones are in various stages of the network testing process, and, barring any difficulties encountered during testing, are expected to be available to USCC's dealers and consumers by the end of 2003. Audiovox 8410, Audiovox 8900, Kyocera Kx414e, Kyocera Sx47e, LG vx3100a and LG vx6000.

USCC anticipates that its handset sales will increase, both in raw numbers and as a percentage of USCC's total handset sales USCC will continue to track its sales of GPS-enabled phones in order to ensure compliance with the penetration benchmarks in the Commission's *Order to Stay*.

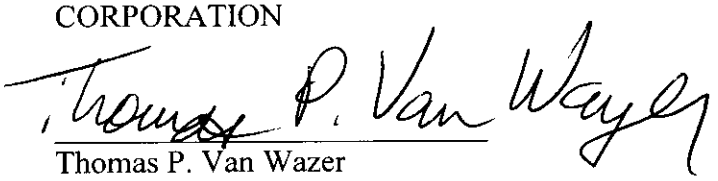
[7] *See Order to Stay* ¶ 27.

IV. Conclusion

As demonstrated above, USCC continues to make significant progress in deploying E911 phase I and phase II service throughout its service area. The commitment of significant financial and personnel resources has enabled USCC to move closer to its goal of meeting or exceeding the Commission's implementation deadlines for E911 deployment.

Respectfully submitted,

UNITED STATES CELLULAR CORPORATION



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AFFIDAVIT OF JAMES JENKINS

I, James Jenkins, hereby declare as follows:

1. I am Vice President, Legal and External Affairs, for United States Cellular Corporation ("USCC"). In this capacity, I am familiar with USCC's E911 deployment efforts.

2. I have reviewed the foregoing USCC Quarterly E911 Implementation Report and believe that the facts contained therein are true and accurate.

I declare under penalty of perjury that the foregoing is true and correct, to the best of my knowledge and belief.

Dated this 31st day of October, 2003.

James Jenkins